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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/707,644	12/29/2003	Guy Pardon	FREI.P048DV	1643

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EXAMINER	
LOVEL, KIMBERLY M	
ART UNIT	**PAPER NUMBER**
2167	

DATE MAILED: 05/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/707,644	PARDON ET AL.	
	Examiner	Art Unit	
	Kimberly Lovel	2167	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 December 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *6-37* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *6-37* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *29 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *12/30/03 11/22/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-5 have been cancelled.

2. Claims 6-37 are rejected.

Information Disclosure Statement

3. The information disclosure statement (IDS) submitted on 12/30/2003 and 11/22/2004 was filed after the mailing date of the application on 12/29/2003. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Specification

4. The abstract of the disclosure is objected to because the abstract contains more than 150 words. Correction is required. See MPEP § 608.01(b).

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 101

5. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 6-9, 12-14 and 18-37 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

MPEP 2106 IV.B.2.(b)

A claim that requires one or more acts to be performed defines a process. However, not all processes are statutory under 35 U.S.C. 101. Schrader, 22 F.3d at 296, 30 USPQ2d at 1460. To be statutory, a claimed computer-related process must either: (A) result in a physical transformation outside the computer for which a practical application is either disclosed in the specification or would have been known to a skilled artisan, or (B) be limited to a practical application.

Claims 6-9, 12-14 and 18-37 recite a data management system. In each case, the system can take the form of an entirely software embodiment. Therefore, the claims are directed towards software per se. Software per se fails to produce a tangible result. In order for the subject matter to be considered statutory, it must produce a useful, concrete and tangible result.

To allow for compact prosecution, the examiner will apply prior art to these claims as best understood, with the assumption that applicant will amend to overcome the stated 101 rejections.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 6-37 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent No 6,233,585 to Gupta et al (hereafter Gupta et al).

Referring to claim 6, Gupta et al disclose a data management system, said system characterized as a composite system (see abstract), the system comprising

a plurality of processes (see column 5, lines 11-13);

each process having an interface and implementing at least one respective service defined by that interface (see column ~~15~~ 5, lines 16-29 and lines 11-13);

a first invocation of the at least one respective service by a transaction resulting in the creation of a first transaction local to the process thereof, the first local transaction being a child of the invoking transaction and being parent of any transaction triggered by invocation of a service of another process (see column 8, lines 36-43);

a second invocation of the at least one respective service by a transaction resulting in the creation of a second transaction local to the process thereof, the first local transaction being a child of the invoking transaction and being parent of any transaction triggered by invocation of a service of another process (see column 8, lines 36-43);

each process characterized in that if the first transaction and the second transaction conflict but are both children of a same invoking transaction, then the first transaction and the second transaction are not executed concurrently (see column 8, lines 44-51);

each process further characterized in that each transaction local thereto is independently handled at the process (see column 9, lines 6-17);

each process making scheduling and recovery decisions independent of any centralized component (see column 9, lines 48-50).

Referring to claim 7, Gupta et al disclose the system of claim 6 wherein the root transaction is able to dynamically set concurrency preferences for the resulting distributed transaction, based on client needs (see column 5, line 61 – column 6, line 3 – the isolation level selected is considered to represent the concurrency preference).

Referring to claim 8, Gupta et al disclose a data management system, said system characterized as a composite system (see abstract), the system comprising

a plurality of processes (see column 5, lines 11-13);

each process having an interface and implementing at least one respective service defined by that interface (see column 5, lines 11-13);

invocation of the at least one respective service by a thread of the invoking transaction and being parent of any transaction triggered by invocation of a service of another process (see column 11, lines 12-32);

each process further characterized in that each transaction local thereto is independently handled at the process (see column 9, lines 6-17);

each process making scheduling and recovery decisions independent of any centralized component triggered by invocation of a service of another process, each process further characterized in that each transaction local thereto is independently handled at the process, each process making scheduling and recovery decisions independent of any centralized component (see column 9, lines 48-50), the method comprising the steps of:

propagating from a first process to a second process a message indicative of a globalCommit operation with respect to a root transaction, said message also indicative of a number or identifying list of invocations which the first process has made to the second process on behalf of the root transaction (see column 8, lines 36-43);

within the second process, comparing the number or list indicated in the message with a count or list within the second process of the number or list of invocations which have been made on behalf of the root transaction (see column 8, lines 36-43);

in the event the comparison yields a non-match, aborting the transaction (see column 9, lines 48-50).

Referring to claim 9, Gupta et al disclose the system of claim 8 wherein each process is built using Java (see column 13, lines 1-6).

Referring to claim 10, Gupta et al disclose a method for use with a data management system, said system characterized as a composite system (see abstract), the system comprising a plurality of processes (see column 5, lines 11-13), each

process having an interface and implementing at least one respective service defined by that interface (see column 5, lines 11-13), invocation of the at least one respective service by a transaction resulting in the creation of a transaction local to the process thereof, the local transaction being a child of the invoking transaction and being parent of any transaction triggered by invocation of a service of another process (see column 11, lines 12-32), each process further characterized in that each transaction local thereto is independently handled at the process, each process making scheduling and recovery decisions independent of any centralized component, the method comprising the steps of:

propagating from a first process to a second process a message indicative of a globalCommit operation with respect to a root transaction, said message also indicative of a number or list of invocations which the first process has made to the second process on behalf of the root transaction (see column 8, lines 36-43);

within the second process, comparing the number or list indicated in the message with a count or list within the second process of the number or list of invocations which have been made on behalf of the root transaction (see column 8, lines 36-43);

in the event the comparison yields a match, proceeding with the globalCommit operation (see column 9, lines 48-50).

Referring to claim 11, Gupta et al disclose a method for use with a data management system, said system characterized as a composite system (see abstract), the system comprising a plurality of processes (see column 5, lines 11-13), each

process having an interface and implementing at least one respective service defined by that interface (see column 5, lines 11-13), invocation of the at least one respective service by a transaction resulting in the creation of a transaction local to the process thereof, the local transaction being a child of the invoking transaction and being parent of any transaction triggered by invocation of a service of another process, each process further characterized in that each transaction local thereto is independently handled at the process (see column 11, lines 12-32), each process making scheduling and recovery decisions independent of any centralized component (see column 9, lines 6-17), the method comprising the steps of:

propagating from a first process to a second process a message indicative of a globalCommit operation with respect to a root transaction, said message also indicative of a number or list of invocations which the first process has made to the second process on behalf of the root transaction (see column 8, lines 36-43);

within the second process, comparing the number or list indicated in the message with a count or list within the second process of the number or list of invocations which have been made on behalf of the root transaction (see column 8, lines 36-43);

in the event the comparison yields a non-match, aborting the transaction (see column 9, lines 48-50).

Referring to claim 12, Gupta et al disclose a distributed system, said system characterized as a composite system (see abstract), the system comprising

a plurality of processes (see column 5, lines 11-13);

each process having an interface and implementing at least one respective service defined by that interface (see column 15, lines 16-29 and lines 11-13);

each or any globalCommit message exchange between processes also carrying information about the actual work being committed (see column 6, lines 12-20 – a commit at the persistent storage is considered to represent a commit).

Referring to claim 13, Gupta et al disclose the system of claim 12, such information being logged for recoverability in the event of a crash, such information being used for assistance at any time before, during or after global commitment (see column 11, lines 12-21).

Referring to claim 14, Gupta et al disclose the system of claim 12 or 13, wherein any globalCommit requires a registration, and wherein the registration for a globalCommit also carries information about the actual work being committed (see column 11, lines 12-21).

Referring to claim 15, Gupta et al disclose a method for use in a distributed system, said system characterized as a composite system (see abstract), the system comprising a plurality of processes (see column 5, lines 11-13), each process having an interface and implementing at least one respective service defined by that interface (see column 5, lines 11-13), the method comprising the step of:

for each globalCommit message exchanged between processes, including also information about the actual work being committed (see column 6, lines 12-20).

Referring to claim 16, Gupta et al disclose the method of claim 15 further comprising the step of logging such information for recoverability in the event of a crash,

such information being used for assistance at any time before, during or after global commitment (see column 11, lines 12-21).

Referring to claim 17, Gupta et al disclose the method of claim 15 or 16 further comprising the step of propagating a registration for a globalCommit, wherein the registration for a globalCommit also carries information about the actual work being committed (see column 11, lines 12-21).

Referring to claim 18, Gupta et al disclose a distributed system, said system characterized as a composite system (see abstract), the system comprising

a plurality of processes (see column 5, lines 11-13);

each process having an interface and implementing at least one respective service defined by that interface (see column 15, lines 16-29 and lines 11-13);

wherein the root invocation or, alternatively, the root's human user is allowed to dynamically set its/his concurrency preferences for the entire invocation (see column 12, lines 30-32).

Referring to claim 19, Gupta et al disclose the system of claim 18 wherein the root invocation (transaction) propagates the concurrency preferences with each or any child invocation it makes (see column 12, lines 46-50).

Referring to claim 20, Gupta et al disclose the system of claim 19 wherein each invocation propagates the concurrency preferences as it has received them from the root invocation (see column 12, lines 46-50).

Referring to claim 21, Gupta et al disclose the system of claim 20 wherein the propagated concurrency preferences at any level in the root invocation's invocation

hierarchy specify the extent to which shared resource access is desired or allowed or denied among descendant invocations of the root invocation or user and other, concurrent invocations who are also descendants of the same root (see column 12, lines 46-50).

Referring to claim 22, Gupta et al disclose the system of claim 20 wherein the propagated concurrency preferences at any level in the root invocation's invocation hierarchy specify the extent to which shared resource access is desired or allowed or denied among descendant invocations of the root invocation or user and other, concurrent invocations who are not descendants of the same root (see column 12, lines 46-50).

Referring to claim 23, Gupta et al disclose a data management system, referred to as service, comprising:

One or more operations that can be invoked by remote clients (see column 3, lines 7-9 - transactions);

Some or all such remote clients having one or more associated contexts or transaction contexts (see column 8, lines 10-51);

An invocation by a remote client also containing partial or complete information indicating or containing said client's context or contexts (see column 8, lines 10-51);

An invocation, by a remote client, of an operation leading to a new transaction different from, but possibly related to, any existing client transaction (see column 5, lines 16-19);

Such an operation-level transaction being committed before the client context is terminated before globalCommit notification (see column 12, lines 28-57);

The service maintaining an undo operation for such a committed operation (see column 6, lines 12-20);

A failing or failed remote client context leading to the execution of the undo operations of the corresponding committed invocations in the service (see column 7, lines 42-46).

Referring to claim 24, Gupta et al disclose the system of claim 23 where some or all undo operations are executed in an order that is the reverse of the order of their original counterparts (see column 9, line 66 – column 10, line 2 – rollback is considered to represent undo; first-in-last-out is considered to represent reverse order).

Referring to claim 25, Gupta et al disclose the system of claim 23 where in addition the undo operations are chosen or defined in the same system as the one where the corresponding normal operations were executed (see column 12, lines 46-56).

Referring to claim 26, Gupta et al disclose the system of claim 23 where some or all undo operations are unknown to a remote client or its context (see column 12, lines 11-12).

Referring to claim 27, Gupta et al disclose the system of claim 23 where some or all undo operations are executed after a timeout and independent of whether the client's context outcome requires such undo (see column 12, lines 11-12).

Referring to claim 28, Gupta et al disclose the system of claim 23 where an undo operation's effects are confined to the data managed by the service on which the undo operation is maintained, even if the original operation involved other services (see column 12, lines 45-56).

Referring to claim 29, Gupta et al disclose the system of claim 23 where the service keeps locks to ensure that undo operations can be executed correctly (see column 9, lines 19-21).

Referring to claim 30, Gupta et al disclose the system of claim 23 where client context-related information is also part of any global commit message exchanges (see column 10, lines 4-7).

Referring to claim 31, Gupta et al disclose the system of claim 23 where client context information includes application-specific data (see column 10, lines 4-7 – the context relates to the transaction which is considered to be application-specific).

Referring to claim 32, Gupta et al disclose system of claim 31 where all or part of the context information is logged, i.e. stored on persistent storage, and retrievable by a human. Administrator (see column 8, lines 11-14).

Referring to claim 33, Gupta et al disclose system of claim 23 where the service accepts messages indicative of which previously committed operations have to be undone (see column 11, lines 1-7).

Referring to claim 34, Gupta et al disclose system of claim 23 where the service accepts messages indicative of which previously committed operations do not have to be undone (see column 11, lines 1-7).

Referring to claim 35, Gupta et al disclose the system of claim 1 where some or all invocations are message-based or asynchronous (see column 3, lines 1-4).

Referring to claim 36, Gupta et al disclose system of claim 23 where some or all invocations are synchronous (see column 3, lines 1-4).

Referring to claim 37, Gupta et al disclose system of claim 23 where the client can request the undo executions of its invocations at the service while still allowing globalCommit in the end (see column 12, lines 28-56).

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- US Patent No. 6,298,478
- US Patent No. 5,701,480
- US Patent No. 5,193,188
- US Patent No. 6,151,607
- US Patent No. 6,714,962
- US Patent No. 5,504,899

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimberly Lovel whose telephone number is (571) 272-2750. The examiner can normally be reached on 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Cottingham can be reached on (571) 272-7079. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kimberly Lovel
Examiner
Art Unit 2167

kml
11 May 2006

JOHN R. COTTINGHAM
PRIMARY EXAMINER

15 May 2006